

Novel Epoxy Hardeners for Improved Properties, Processing and Handling

Abstract of the Disclosure

Hardeners for epoxy resins are disclosed which have the capability of curing at lower temperatures than currently available hardeners while retaining superior mechanical and thermal properties. An especially useful hardener combines imidazole, tetramethylguanidine or tetramethylguanidine adduct, and trimethylolpropane to produce a hardener having a latency period of up to about 24 hours and which cures at temperatures as low as about 60°C. A second hardener mixture is composed of 2, 6-bis(hydroxymethyl)-p-cresol, tetramethylguanidine and trimethylolpropane. Accelerators and other materials are added as needed to modify the cure time and temperature to suit particular applications. A method for making the hardener is also disclosed.

